In its benefit-cost analysis, the NCEMD determined that indirect losses – resulting from lost revenue to the wastewater treatment plant – would be approximately $104,000, with environmental fines totally approximately $30,000.[5]

In the final analysis, the real benefit of this project is the safety and security that is provided to the electrical repair workers, who risked personal injury on a monthly basis to repair the electric power lines.

REDUCING THE VULNERABILITY OF WASTEWATER SYSTEMS: TWO PROJECTS THAT ARE WORKING

Hurricane Floyd demonstrated once again the vulnerability of wastewater treatment systems to flooding. As Floyd made its way inland, nearly two dozen wastewater treatment plants were inundated, quickly becoming inoperable. For those communities that sustained major damages to utilities – including Kinston, Tarboro, Rocky Mount, Greenville and others – recovery was delayed, including business resumption.

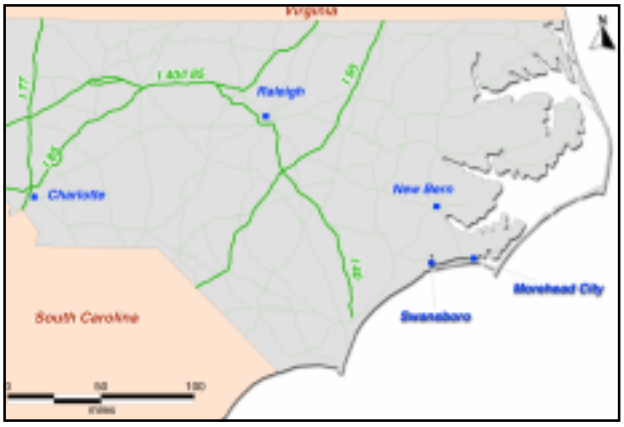

Figure 4.5 *Eastern North Carolina*

Measuring Success profiles three communities that benefited from the implementation of mitigation improvements following Hurricane Fran. In each case, the utilities performed as planned during Hurricane Floyd. Overall, the disruption to each community was reduced, the reliability of the wastewater treatment system was improved and the risk of a release of untreated or improperly treated wastewater was reduced.

Morehead City: Electrical Switch Box Relocation

Morehead City, a community of approximately 7,800 residents, is located on the intracoastal waterway of the Atlantic Ocean. The town is prone to flooding from coastal storms, and in previous hurricanes has experienced problems with wastewater control. Today, Morehead City maintains 20 wastewater lift stations, five of which are located within the 100 year floodplain. The electrical panels that provide power to the lift stations are typically located on the outside of the building and exposed to salt spray, wave action, and flooding. The corrosive nature of salt water quickly causes the electrical system to deteriorate. When flooded, the electrical panels often fail, necessitating the installation of replacement panels at a cost of $2,500 each.

Table 4.23

Table 4.3 Morehead City Electric Switch Box Relocation Project: Losses Avoided [to be produced]